

REMARKS

The comments of the applicant below are each preceded by related comments of the examiner (in small, bold type).

Allowable Subject Matter

10. Claims 21, 23, 33-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claim 21 the major difference between the teaching of the prior art of record (Ogawa, Norita et al) and the instant invention is that the light conveyed from the light source includes a strong short pulse imposed on the modulation frequency, and a phase lock loop determines the modulation frequency from the sensor signals, and the sensor signal is sampled at the times triggered by the phase lock loop during the duration of the strong short pulse.

Relative to claim 23 the major difference between the teaching of the prior art of record (Ogawa, Norita et al) and the instant invention is that the conveyed light includes periods of lower frequency modulation and bursts of higher frequency modulation, and the sensor signal associated with the higher frequency bursts is used to lock onto a modulation clock.

Relative to claim 33 the major difference between the teaching of the prior art of record (Ogawa, Norita et al) and the instant invention is that the processes determine the integral power of the overall signal distribution on the sensor and calculate a position of the light at a resolution that is higher than the resolution of the pixels based on half of the integral power position.

Relative to claim 34 the major difference between the teaching of the prior art of record (Ogawa, Norita et al) and the instant invention is that the processes use a polynomial approximation on the signal distribution and calculate a position of the light at a resolution that is higher than the resolution of the pixels as a position of approximated maximum.

Claims 35-37 depend on claim 34.

Claims 21, 23, 33, and 34 have been amended. Other claims have been amended and new claims have been added that include similar limitations and are patentable for at least similar reasons as claims 21, 23, 33, and 34. The applicant does not concede that broader claims and other claims would not also be patentable and reserves the right to pursue such claims in other patent applications.

All of the dependent claims are patentable for at least the reasons for which the claims on which they depend are patentable.

Canceled claims have been canceled without prejudice or disclaimer.

Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made

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arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

Please apply any charges or credits to deposit account 06-1050.

Date: _____

10/16/06

Respectfully submitted,



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